



NC Marine Aquaculture Update

Chuck Weirich

NC Sea Grant

- ✓ **2014 production update and trends**
- ✓ **Grants and research projects**
- ✓ **Aquaculture development park**
- ✓ **Legislative update**
- ✓ **Upcoming meetings and workshops**

2014 North Carolina Shellfish Aquaculture Status

Leases and Acreage



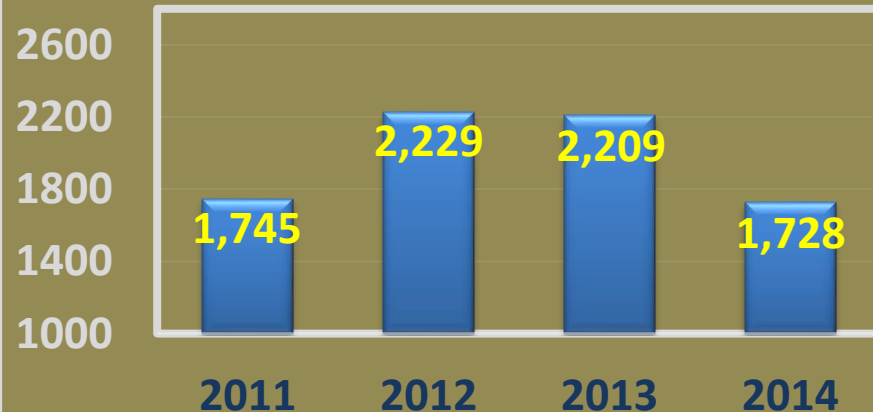
233 Leases (+ 2.6%)

1,728 Acres (- 22.5%)

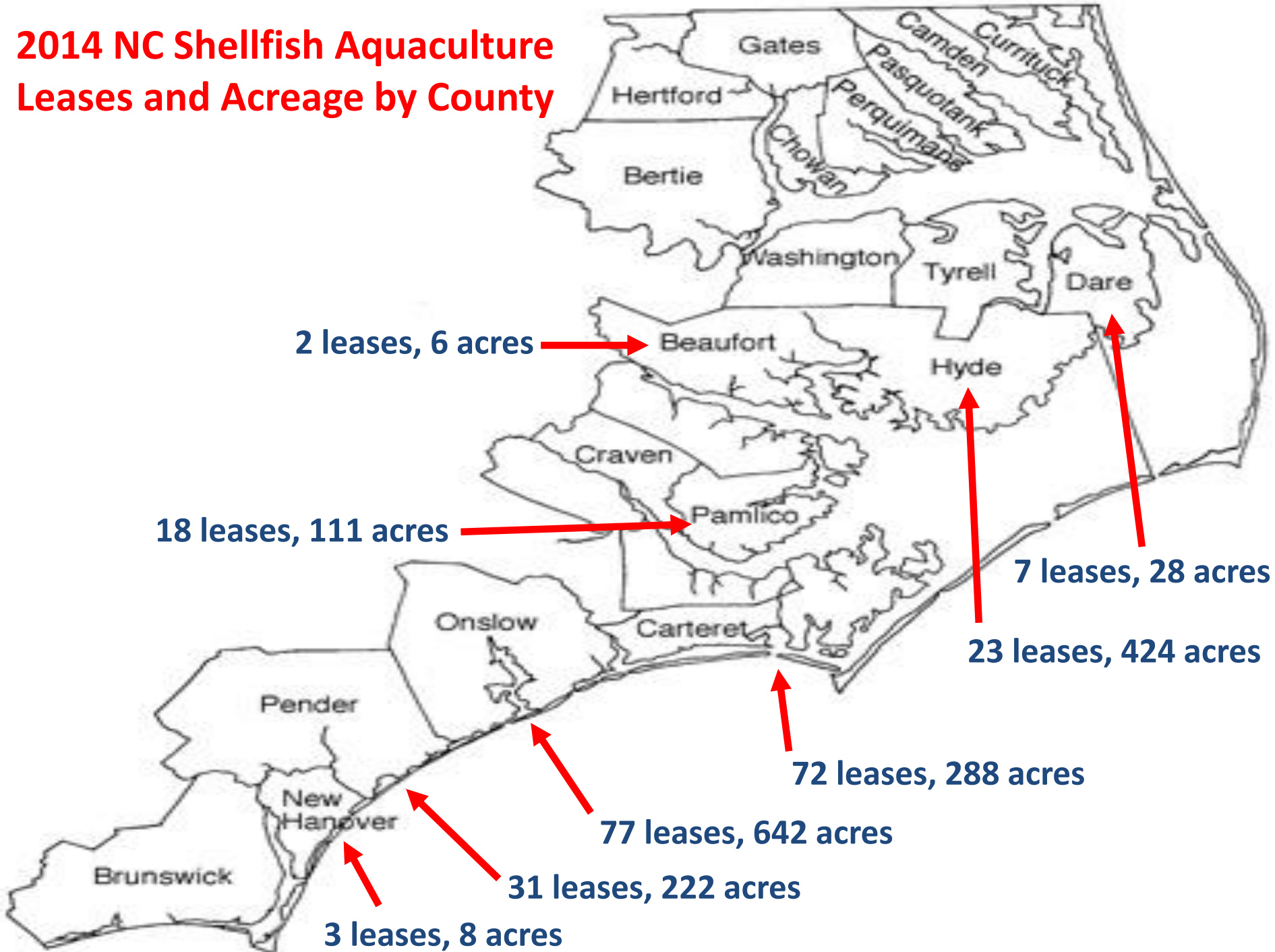
Leases



Acreage



2014 NC Shellfish Aquaculture Leases and Acreage by County

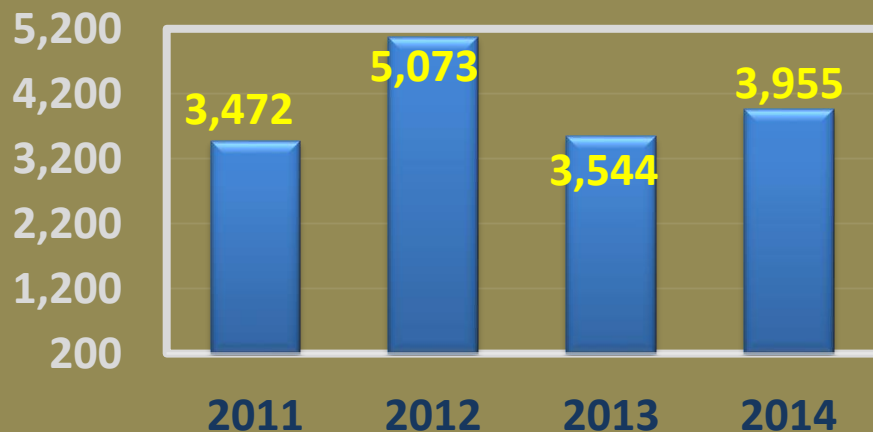


2014 North Carolina Shellfish Aquaculture Status

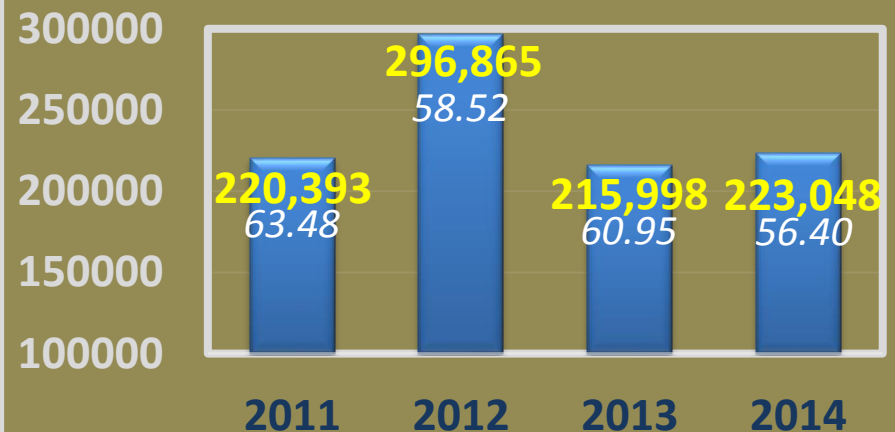
Clam Production and Farm-Gate Value

3,955 Bushels (+ 11.6%) \$223,048 (+ 3.3%)

Production (bushels)



Value (\$)



2014 North Carolina Shellfish Aquaculture Status

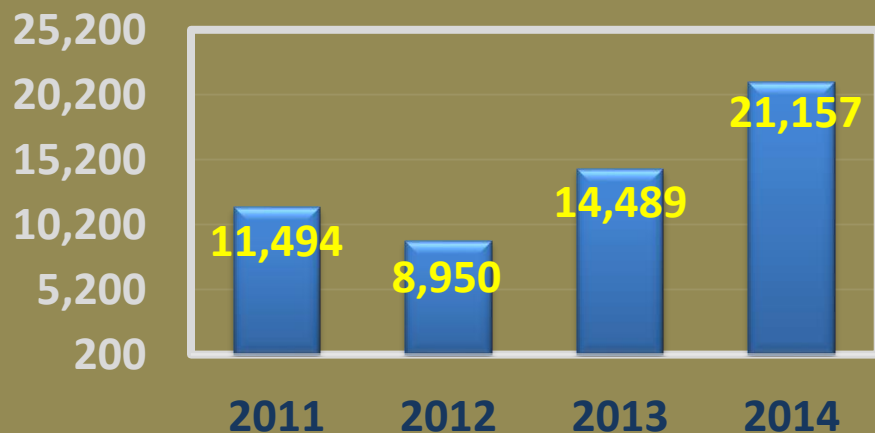
Oyster Production and Farm-Gate Value



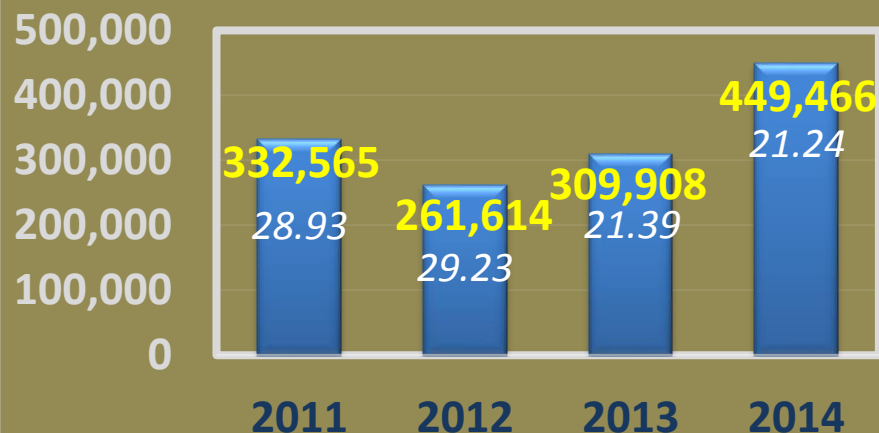
21,157 Bushels (+ 46.0%)

\$449,466 (+ 45.0%)

Production (bushels)



Value (\$)

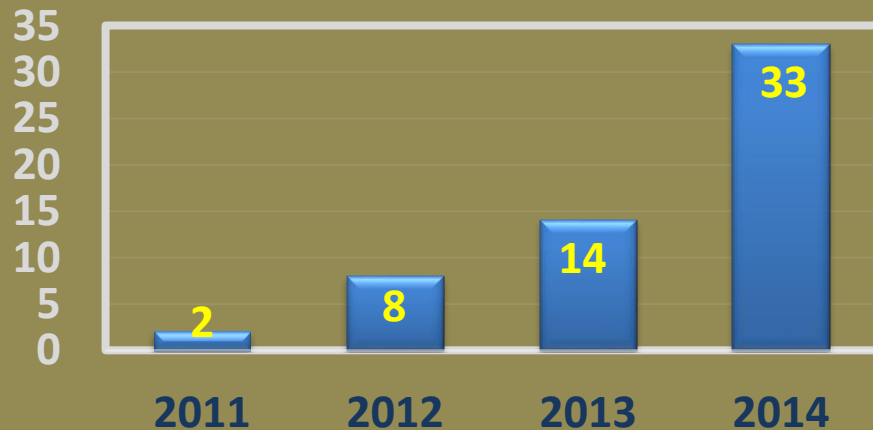


Increased number of leases and acreage devoted to water column leases

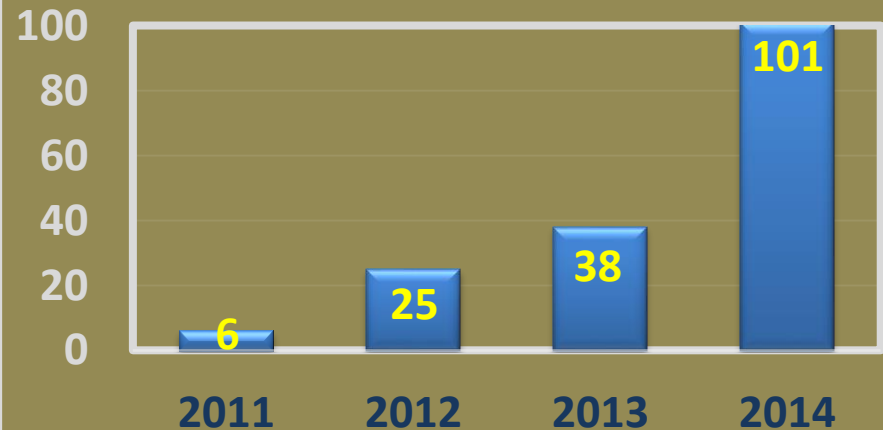
2014 – 33 leases (+ 136.0%)
101 acres (+ 166.0%)



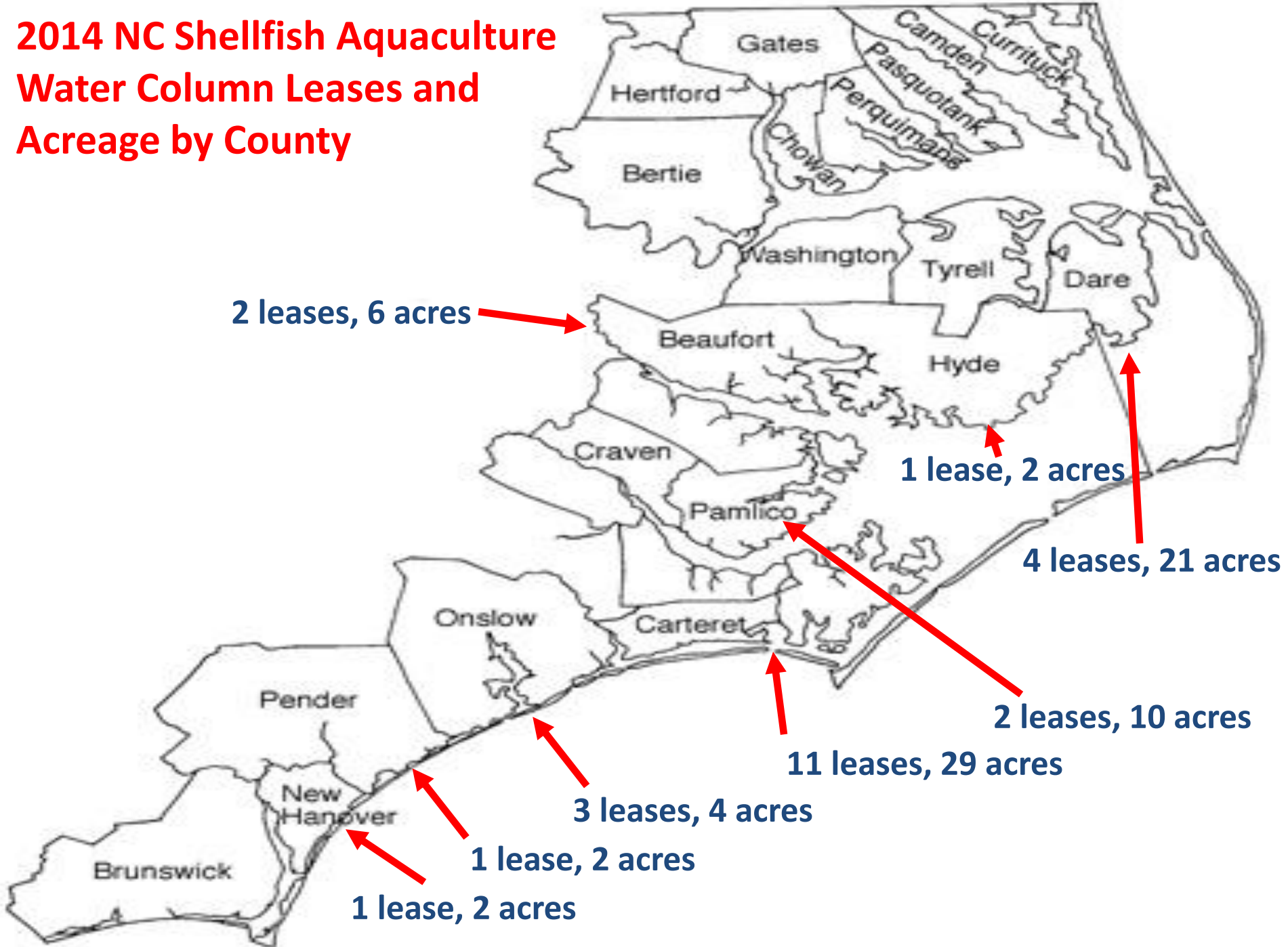
Water column leases



Water column acreage



2014 NC Shellfish Aquaculture Water Column Leases and Acreage by County



Intensive culture using containerized systems expanding

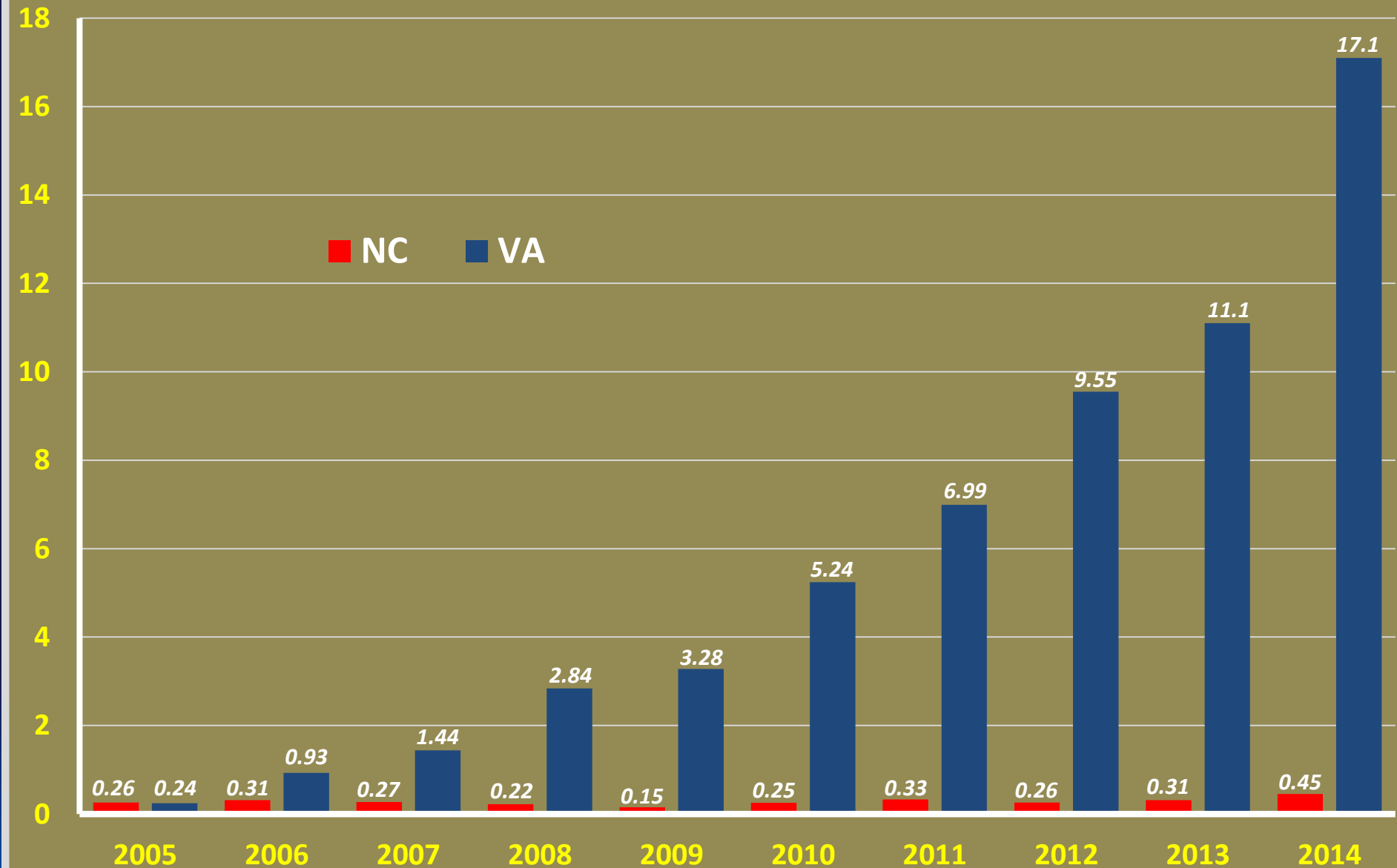


Market for cultured shellfish remains strong and is growing

Significant potential for market development, including value-added products



Farm Gate Oyster Value (millions USD)



Farm Gate Shellfish Value (millions USD)

	North Carolina	Virginia
Clams	0.22	38.8
Oysters	0.45	17.1
Total	0.67	55.9

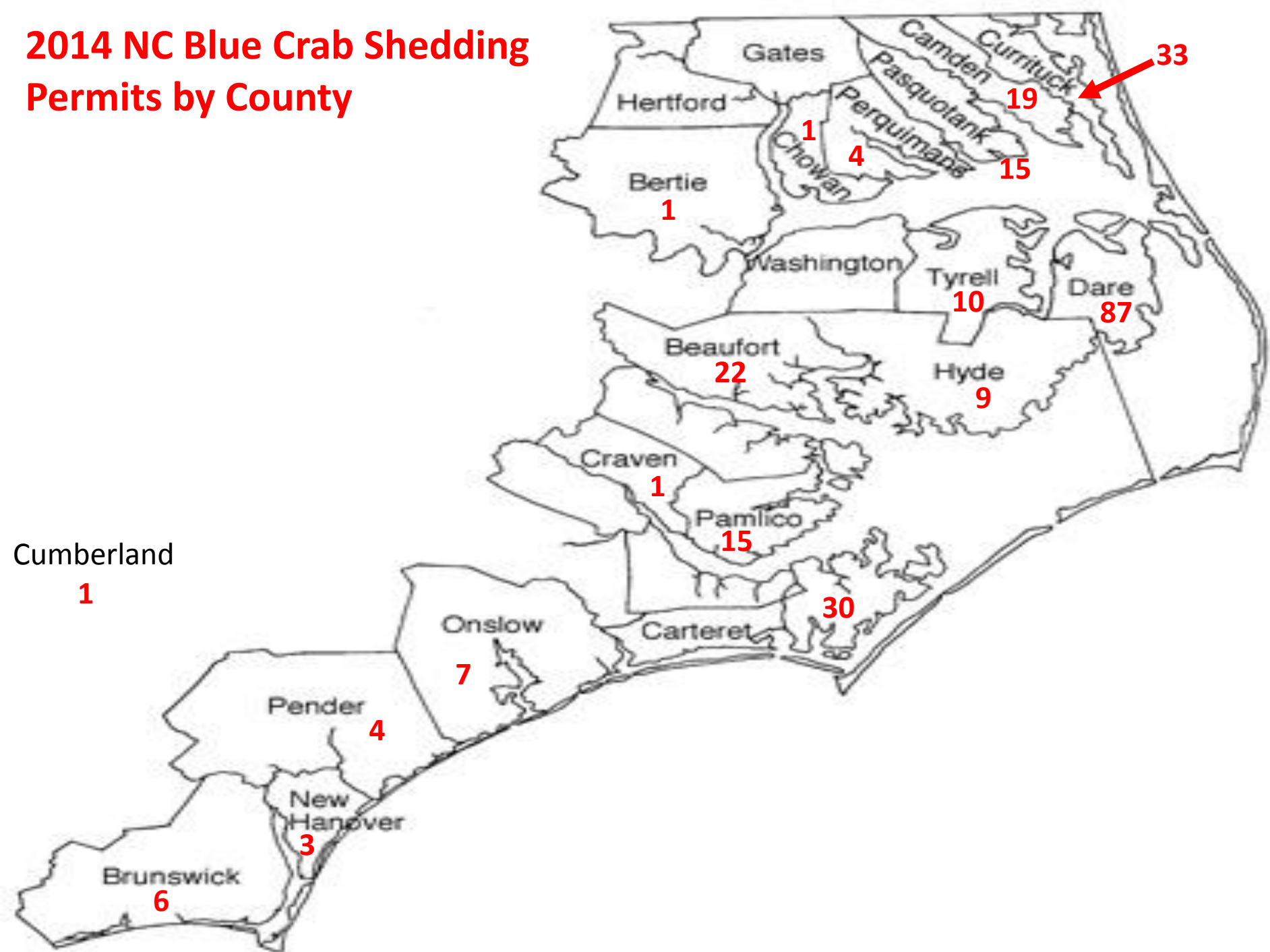


2014 North Carolina Blue Crab Shedding Industry Status Permits

279 permits (+ 0.0%)



2014 NC Blue Crab Shedding Permits by County

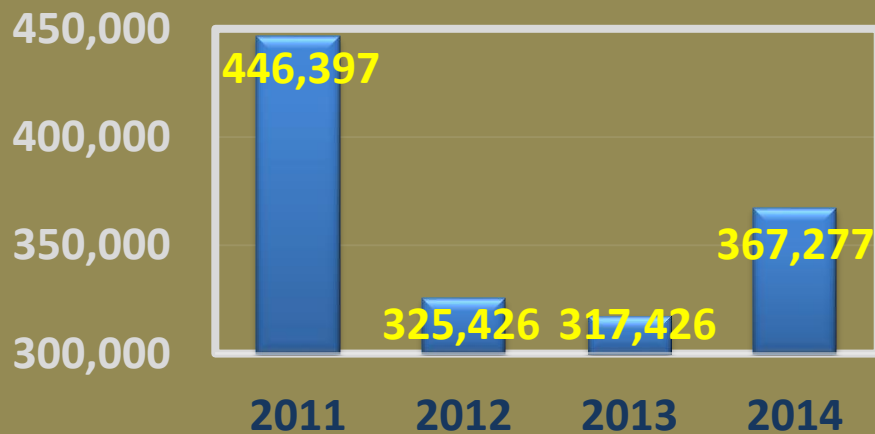


2014 North Carolina Blue Crab Shedding Industry Status Production and Farm-Gate Value

367,939 lbs (+ 15.7%)

\$2.14 mill (+ 2.4%)

Production (lbs)



Value (\$ million)



North Carolina Crab Shedding Industry Trends and Issues

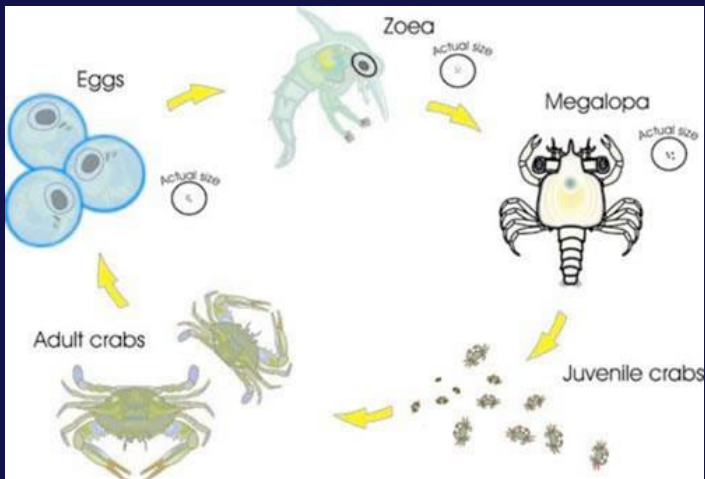


Dependence on wild “caught” product, reductions in stock

Production based on seasonal availability (highly weather dependent)

Strong market demand, price- timing is critical





Support research addressing reduced blue crab populations



Hatchery and nursery production of peeler crabs



Use of recirculating aquaculture systems

Alternate crops for off-season production



Research and Grants

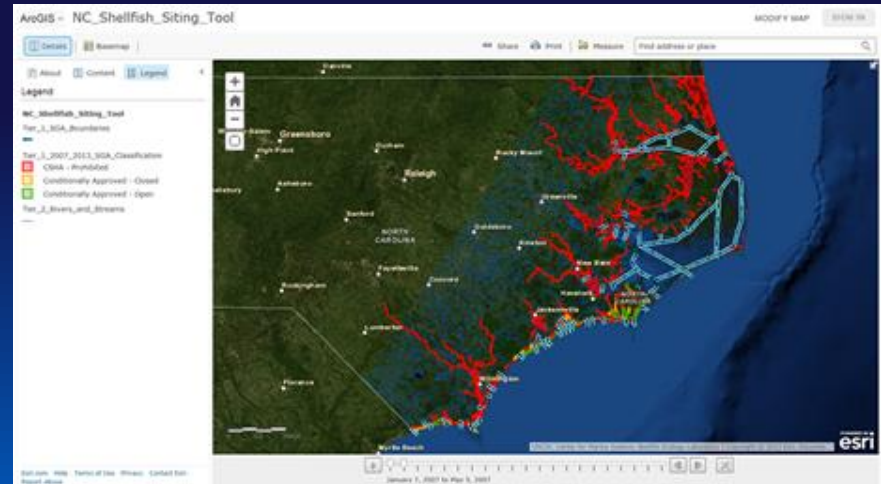
Ami Wilbur, UNCW

Oyster strain development and evaluation
Crop diversification (sunray venus clams and bay scallops)



Troy Alphin, UNCW

Shellfish siting tool
Lease suitability

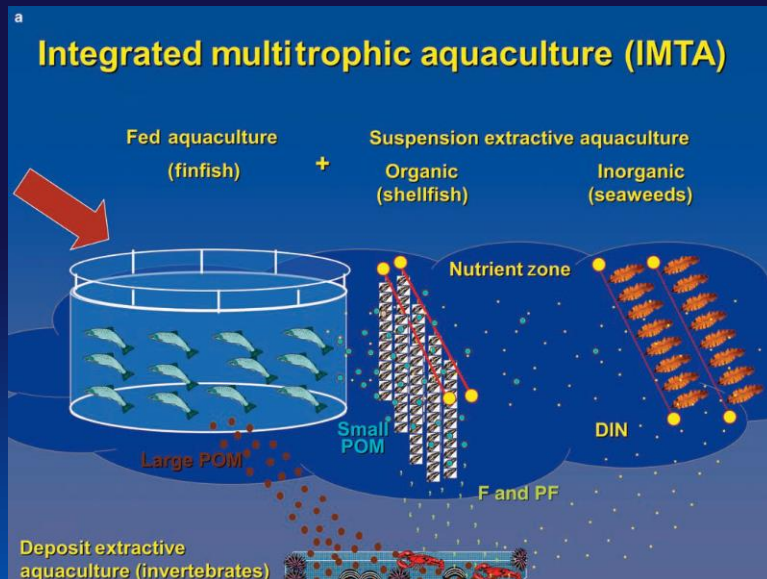
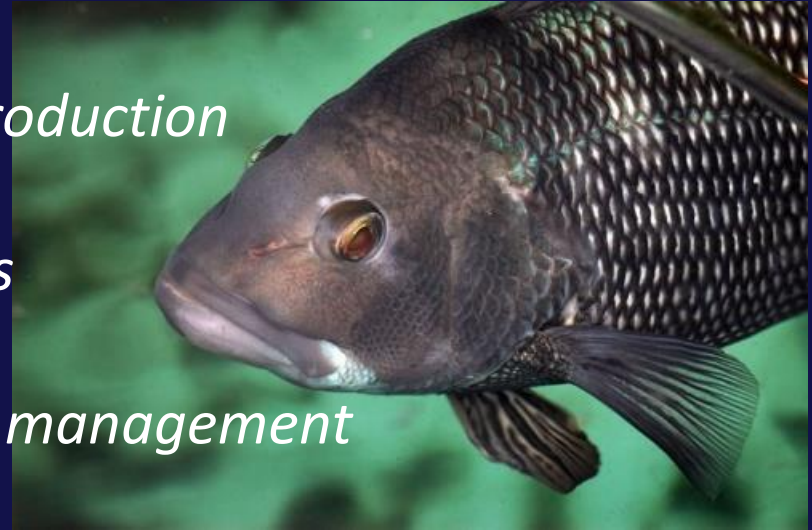


Wade Watanabe, UNCW

Black sea bass hatchery and juvenile production

Development of reduced fish meal diets

Multi-trophic aquaculture and effluent management



Marin Aquaculture Research Center





Mini-grant Program

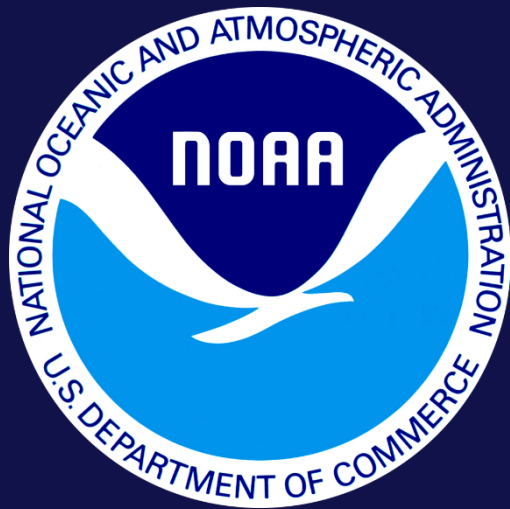


Reducing calcium concentrations to extend paper shell stage of molted blue crabs



Producing native NC triploid oysters by heat and pressure shock of fertilized eggs





Expansion and Diversification of the North Carolina Shellfish Aquaculture Industry

Aquaculture Extension and Technology Transfer Program

Improving Consistency and Quality of Premium Farmed Southern Oysters



✓ Establish demonstration facilities for shellfish aquaculture training and evaluate shellfish production Methods

✓ Evaluate intensive water column oyster production using different gear types and seed produced from broodstock lines developed for North Carolina

✓ Assess the potential of sunray venus clam culture to diversify the state's shellfish industry

✓ Determine shellfish market demand and develop value-added products





Multi –state project (LA, MS, AL, FL, SC, NC)

- ✓ Stocking density
- ✓ Strain evaluation
- ✓ Methods for fouling control





NORTH CAROLINA DOWN EAST
AQUACENTRE

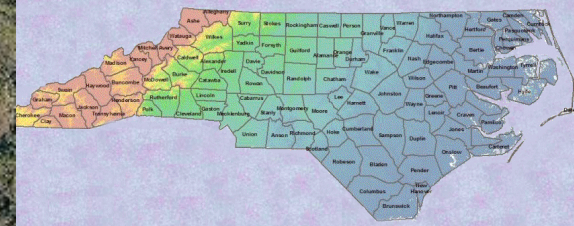
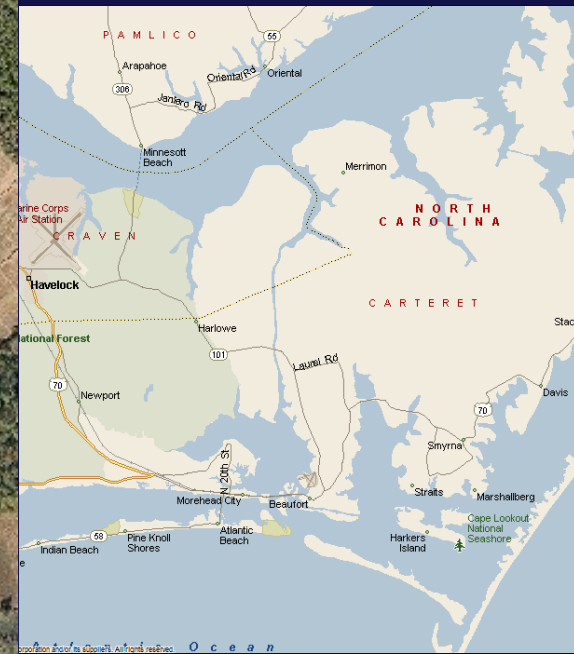
*Leading the **Blue Revolution** through Aquaculture Research and Technology*

- ✓ IJ Won/Marshallberg Farm
- ✓ Carteret Co. Economic Development Council
- ✓ Marine Bio-Technologies Center of Innovation

Marshallberg Farm Pasture Designation and Acreage

Total area: 275 acres

Organic livestock area: 135 acres



Legislative update

- ✓ House and Senate Bills
- ✓ “Strengthen Oyster Aquaculture”
- ✓ Moving up the chain and *favorable*

Shellfish Aquaculture Meeting Set for Aug. 25

Provides Overview of USDA Farm Service Agency Programs

- ✓ Farm Loans
- ✓ Noninsured Disaster Assistance Program (NAP)
- ✓ Rural Energy for America Program (REAP)

6 PM Tuesday, August 25, CMAST building, Morehead City
Call or email Vanda Lewis at 252-222-6307 or
vanda_lewis@ncsu.edu to register



Questions?

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